

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants : Dr. Günter HALMSCHLAGER et al.  
Group Art Unit: 1731  
Appln. No. : 09/646,119  
Examiner: J. Fortuna  
Filed : January 21, 2000  
Confirmation No.: 3782  
§ 371 Date : October 30, 2000  
For : MACHINE AND PROCESS FOR PRODUCING A MULTI-LAYERED  
FIBROUS WEB

**RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF AND  
SUPPLEMENTAL APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Commissioner for Patents  
U.S. Patent and Trademark Office  
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Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

In response to the Notification of Non-Compliant Appeal Brief of July 25, 2007, which set a response period of one month, Appellants submit herewith a Supplemental Appeal Brief Under 37 C.F.R. 41.37 that addresses the defects identified by the Patent Appeal Center Specialist in Notification.

Appellants submit the Examiner checked paragraph 3 on the Notification form PTOL-462, i.e., "At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement as to the status of each such amendment (37 CFR 41.37(c)(1)(iv))." However, as the instant application is not currently under final rejection, i.e., all pending claims are currently at least twice rejected, this objection is highly questionable. Moreover, as no amendments were presented in response to *any* final rejections (of April 25, 2002 or of April 21,

2003), the basis for this objection is unclear and entirely improper.

Appellants note the Notification also asserts section (3) *Status of Claims* of Appellants' June 25, 2007 Appeal Brief, which clearly and unambiguously indicates "[c]laims 46 – 97 are currently pending and have been at least twice rejected" by the Examiner, fails to identify the claims on appeal. Appellants submit, even absent the phrase "and are being appealed," the Board members would have been fully aware that pending claims 46 – 97 were on appeal, particularly in view of Appellants' *Claims Appendix* to the Appeal Brief, which includes "a listing of all pending claims on appeal in the instant application," i.e., pending claims 46 – 97. Thus, Appellants submit the Appeal Brief clearly and unambiguously identifies each claim currently on appeal in the instant matter.

However, in an effort to be fully responsive, Appellants submit herewith a Supplemental Appeal Brief to revise section (3) to even more clearly indicate pending claims 46 – 97 are being appealed. Further, to avoid any other confusion, the instant Supplemental Brief revises the headings in sections (6) and (7) to even more clearly summarily identify the pending issues on appeal.

Appellants note this Supplemental Appeal Brief is being timely submitted within one month of mailing of the Notification of Non-Compliant Appeal Brief, i.e., by August 27, 2007 (August 25, 2007 being a Saturday).

Moreover, as the requisite fee under 37 C.F.R. 1.17(c) in the amount of \$ 500.00 for the filing of the Appeal Brief was previously paid, Appellants submit no fee is due at this time for consideration of the pending appeal. However, if for any reason a fee is deemed necessary, the

undersigned authorizes the charging of any filing fees for the Appeal Brief and/or any necessary extension of time fees to Deposit Account No. 19 - 0089.

(1) **REAL PARTY IN INTEREST**

The real party in interest is Voith Sulzer Papiertechnik Patent GmbH by an assignment recorded in the U.S. Patent and Trademark Office on October 30, 2000 at Reel 011271 and Frame 0625.

(2) **RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending.

**(3) STATUS OF THE CLAIMS**

Claims 46 – 97 are currently pending, have been at least twice rejected, and are being appealed.

**(4) STATUS OF THE AMENDMENTS**

No amendments have been entered subsequent to the April 25, 2007 Notice of Appeal.

(5) **SUMMARY OF THE CLAIMED SUBJECT MATTER**

The instant invention is directed to a machine for producing a multi-layered fibrous web, e.g., a paper or cardboard web, in which the layers created by each former are couched together, i.e., connected. (Specification page 1, lines 3 - 6).

The following descriptions are made with respect to the independent claim and include references to particular parts of the specification. As such, the following is merely exemplary and is not a surrender of other aspects of the present invention that are also enabled by the present specification and that are directed to equivalent structures or methods within the scope of the claims.

Independent claim 46 is directed to a machine for the production of a multi-layered fibrous web. The machine includes at least two formers 10, 12 for forming at least two layers A, B (and C and D) in which each layer has a higher content of fines on one side (symbolically indicated as the base of a triangle) respectively (specification page 7, lines 9 – 20; and Figures 1, 3, and 4 (and layers Band C in Figures 2 and 5)), and a couching zone in which the at least two layers are couched together (in couching zone 30) such that each layer's A and B (or B and C) side having a higher content of fines (symbolically indicated as the base of a triangle) contact each other. (Specification page 7, line 26 – page 8, line 2; and Figure 1). At least one of the at least two formers includes at least one gap former. (Specification page 2 lines 20 – 21; and Figure 3).

Independent claim 75 is directed to a process for the production of a multi-layered fibrous web. The process includes forming at least two layers via at least two formers 10, 12, such that each layer A, B (and C and D) has a side with a higher fines content (symbolically indicated as



the base of a triangle) (specification page 7, lines 9 – 20; and Figures 1, 3, and 4 (and layers Band C in Figures 2 and 5)), and couching together the at least two layers A and B (or B and C) in a couching zone 30 so that the sides with higher fines content (symbolically indicated as the base of a triangle) contact each other. (Specification page 7, line 26 – page 8, line 2; and Figure 1). At least one of the at least two layers is formed by at least one gap former. (Specification page 2, lines 20 – 21; and Figure 3).

**(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

**(A) Claims 46, 47, and 74 are Rejected Under 35 U.S.C. § 102(b) as being Anticipated by or, in the Alternative, under 35 U.S.C. § 103(a) as being Unpatentable Over TURNER et al. (U.S. Patent No. 4,830,709) [hereinafter "TURNER"]; and**

**(B) Claims 48 - 97 are Rejected Under 35 U.S.C §103(a) as being Unpatentable over TURNER, further evidenced by U.S. Patent Nos. 3,378,435; 5,607,551; 5,238,534; and GB 2,283,766.**

(7) **ARGUMENT**

**(A) The Rejection of Claims 46, 47, and 74 Under 35 U.S.C. § 102(b) as being Anticipated by TURNER is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that TURNER shows a device for making multi-ply paper in which the different plies are made in separate headboxes and couched together at their sides having more fines, and that column 2, lines 12- 18 disclose that advantages of joining the plies using the surface having the most fines. Moreover, the Examiner asserts, as TURNER shows all of the claimed elements, and as dewatering in TURNER starts at the bottom and then proceed to the top, so that most of the fines would be at the top, the features of the claims are anticipated by TURNER or would have been obvious with minor modification. The Examiner further asserts TURNER (column 1, lines 37 – 46) discloses better bonding is obtained if plies with higher fines content are joined. Appellants traverse the Examiner's assertions, and request reconsideration and reversal of the pending rejection.

*Independent Claim 46:*

Appellants' independent claim 46 recites, *inter alia*, at least two formers for forming at least two layers in which *each layer has a higher content of fines on one side* respectively, and a couching zone in which the at least two layers are couched together such that *each layer's side having a higher content of fines contact each other*, wherein at least one of the at least two formers comprises at least one gap former. Appellants submit TURNER fails to disclose or render unpatentable at least the above-noted features of the instant invention.

In the Remand from the Board of Patent Appeals and Interferences, the Board indicated

the Examiner had not “explained how the apparatus of TURNER is capable of operating as presently claimed,” nor had the Examiner provided any “analysis which explains why the apparatus of Turner can be used to form two layers with the claimed distribution of fines. To address this defect of his previous rejection, the Examiner now asserts TURNER “shows all of the elements of the claimed device.” Moreover, the Examiner asserts

since most of the dewatering on the gap former occurs at the top . . . , and it is well known Fourdrinier formers have greater concentration of fines at the wire side . . . , then Tuner [sic] et al. are joining plies with higher fines content and therefore, the limitations of the claims are met, or at least the minor modification(s) to obtain the claimed invention would have been obvious to one ordinarily skilled in the art.

Appellants submit that, in order to show anticipation, each and every recited element of the claims must be shown. Anticipation under 35 U.S.C. § 102 requires the disclosure in a single piece of prior art to show each and every limitation of a claimed invention. *Moba, B. V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1321 (Fed. Cir. 2003); *Celeritas Technologies, Ltd. v. Rockwell International Corporation*, 150 F.3d 1354, 1360, 47 USPQ 2d 1516, 1522 (Fed. Cir. 1998); *Applied Medical Resources Corporation v. United States Surgical Corporation*, 147 F.3d 1374, 1377, 47 USPQ2d 1289, 1291 (Fed. Cir. 1998); *Rockwell International Corporation v. The United States, et al.*, 147 F.3d 1358, 47 USPQ2d 1027, 1029 (Fed. Cir. 1998).

The single piece of prior art must describe and enable all limitations of the claimed invention with “sufficient clarity and detail” so that those ordinarily skilled in the art would recognize that the claimed subject matter already existed in the prior art. *Elan Pharmaceuticals Inc. v. Mayo Foundation for Medical Education and Research*, 64 USPQ2d 1292, 1296 (Fed. Cir. 2002); *Crown Operations International, Ltd. v. Solutia Inc.*, 289 F.3d 1367, 1375, 62 USPQ2d 1917, 1921 (Fed. Cir. 2002); *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657

(Fed. Cir. 1990).

According to the Examiner's analysis of TURNER, the pending claims are unpatentable because TURNER "shows all of the elements" and because it is well known that Fourdrinier formers have a greater concentration of fines at the top (based upon the background section in Appellants' own disclosure). However, as Appellants have maintained throughout prosecution of this application, no admission has been made by Appellants that merely forming a web on a single wire produces a higher content of fines on the unsupported side, nor have Appellants admitted that it is well known that the unsupported side contains the most fines due to less dewatering. Moreover, Appellants note the only support the Examiner finds for his interpretation of TURNER is Appellants' own disclosure.

While the "Background of the Invention" section of the instant application identifies a number of known formers, this disclosure also sets forth specific action necessary to achieve a concentration of fines at a particular side of the web, Appellants have made no representations that this information is prior art. Moreover, while a Fourdrinier former is discussed, the background discussion is not an admission that the concentration of fines at the upper side achieved *with power pulses* was known to those ordinarily skilled in art at the time of the invention.

Further, notwithstanding Appellants' background discussion, Appellants note that TURNER fails to disclose, and the Examiner has provided not documentary evidence that the Fourdrinier former employed by TURNER utilizes *power pulses* to control the concentration of fines, such that there is no arguable teaching in the applied art as to the amount of fines at the upper surface of the layer formed by the Fourdrinier former.

Further, in establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is incumbent upon the Examiner to provide a reason *why* one of ordinary skill in the art would have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. *See Ex parte Clapp*, 227 USPQ 972 (BPAI 1985) To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Applicant's disclosure. *See, e.g., Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Notwithstanding the Examiner's statement in the rejection that it would have been obvious to modify TURNER, Appellants contend that the Examiner has not set forth any reasons why one of ordinary skill in the art would have been led to modify the apparatus and process of TURNER. It is respectfully submitted that the courts have long held that it is impermissible to use Appellants' claimed invention as an instruction manual or "template" to piece together teachings of the prior art so that the claimed invention is purportedly rendered obvious. *See In re Fritch*, 972 R.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

In this regard, Appellants submit the Examiner's assertions that "at least with minor modifications" the claimed invention would have been obvious from TURNER, fails to identify any articulable reasons for modifying TURNER in the manner asserted by the Examiner, particularly since TURNER expressly teaches against the Examiner's asserted modification. Thus, Appellants submit the instant rejection is improper and should be reverse and remanded to the Examiner.

Further, while the Examiner is attempting to address the Board's remand, i.e., to explain how TURNER is capable of operating in the claimed manner, Appellants submit the Examiner is not certain how TURNER operates, such that his assertions of anticipation/obviousness are based

solely upon Appellants' disclosure and not upon any specific teaching or suggestion in the art of record.

Appellants again note, while disclosing a multi-ply forming apparatus and process, TURNER fails to disclose a gap former arranged to produce a web layer having one side with higher fines content than the other, and, therefore, certainly fails to disclose joining the sides of the layers having the higher fines content together, as recited in at least independent claim 46. That is, because TURNER provides no disclosure that each web layer is formed to have one side with a higher fines content than the other, Appellants submit that the Examiner's assertions that TURNER is structurally the same as the recited invention is without basis in the art of record.

Further, notwithstanding the Examiner's annotation on Figure 1 of TURNER that most fines are at the higher dewatering side of a gap former, this does not comport with TURNER's specific disclosure on column 2, lines 12- 18 that "by dewatering through both surfaces of both the top and bottom plies, formation of the individual plies is accomplished faster and, equally important, the ply faces which come into ply bonding engagement are better prepared, by virtue of having more fines and less fillers at their surface, to remain permanently bonded together." Appellants submit TURNER's disclosure, absent any prejudice based upon prior review and consideration of Appellants' disclosure, merely provides that the bonding surfaces have more fines than fillers, not that one bonding surface of the layers has a higher fines content than its opposite surface.

Further, while the Examiner now refers to column 1, lines 39 – 45 of TURNER in support of his assertions of anticipation or obviousness, Appellants note this passage only supports the rejection when read in light of Appellants' own disclosure. That is, while TURNER

discloses

where either or both of the mating plies contain an abundance of fines, which promote ply bonding, excessive speed in the rate of water removal through the faces of the plies to be mated adversely affects ply bonding because it tends to draw a greater amount of fillers to the surface,

there is no arguable disclosure of one side having more fines than the other, as recited in the pending claims. TURNER merely discloses an abundance of fines, in relation to fillers, is advantageous to bonding. Further, as TURNER also indicates this abundance of fines cannot be achieved under excessive speed in the water removal, Appellants submit TURNER fails to anticipate or render obvious the invention recited in at least independent claim 46.

Appellants note, rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *WL Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

In view of the above, it is apparent that TURNER fails to disclose an arrangement in which surfaces of the web layers having the higher fines content than their opposite surfaces are



couched together in a couching zone, as recited in the pending claims. That is, because TURNER fails to provide the necessary structure to form the web layers in the manner recited in at least independent claim 46, Appellants submit that TURNER cannot even arguably anticipate the recited feature that the sides having the higher fines content (not taught by TURNER) are couched together, as is likewise recited in claim 46.

As Appellants have maintained throughout the prosecution of this application, the Examiner has made certain assumptions of the TURNER apparatus based upon the disclosure in the instant application, which are not based upon any specific teaching presented in TURNER. In particular, Appellants note that the Examiner continues to construe the disclosure of TURNER in view of Appellants' own disclosure, instead of interpreting the disclosure of TURNER in light of that which was known to those ordinarily skilled in the art at the time of the instant invention.

Appellants further submit the Examiner's attempted explanation of TURNER's capability to operate in the manner set forth in the pending claims is likewise tainted by the Examiner's review of Appellants' own disclosure. Appellants submit it is not enough that the Examiner can rearrange the disclosed features/elements of TURNER to reproduce the Appellants' invention, but there must be some articulable motivation or rationale in the applied art for rearranging the disclosed features in the manner suggested by the Examiner. Appellants submit the burden on the Examiner is even higher in the instant application because the Examiner must show some reason for modifying TURNER that is contrary to the express disclosure of TURNER, i.e., to provide a uniform distribution.

Thus, Appellants continue to point out, as the Examiner's continued (mis)interpretation of TURNER is based solely upon review of the instant application and claims, the asserted

rejection is not based upon the disclosure of TURNER. In particular, TURNER fails to disclose an arrangement or process to form one side of a web layer with a higher fines content than the other side, and no disclosure of an arrangement or process in which sides of web layers having higher fines contents than their other sides are couched together, as recited in the independent claims. Thus, Appellants submit that the rejection is improper and should be withdrawn.

In contrast to the instant invention, TURNER specifically discloses an apparatus specially designed to join together ply faces that have “more fines and less fillers at their surface,” and that this objective is achieved through dewatering both surfaces of each ply. (TURNER, column 2, lines 12 - 18). Moreover, there is no teaching or suggestion, either in TURNER or any other applied document of record, to support an assertion TURNER is capable of operating in the manner recited in the pending claims. In this regard, TURNER provides absolutely no disclosure regarding that comparative amounts of fines between opposite sides of the web. Thus, Appellants submit that the only reasonable interpretation of TURNER’s disclosure, when considering only the disclosure of TURNER, is that the surfaces of each ply to be joined are dewatered so that the surfaces to be joined are formed to contain a higher content of fines than a content of fillers.

However, Appellants submit that ply surfaces having a higher fines to fillers content is not the same as a ply having one surface with a higher fines content than the other surface, which is recited in Appellants’ claims.

Moreover, because TURNER fails to provide any teaching or suggestion of a comparative fines content between opposite sides of a same ply, Appellants submit that there is no teaching in TURNER to even arguably interpret that web plies are formed to have a higher fines content on

one side than the other side, or that the sides of web plies having the higher fines content are couched together, as recited in at least independent claim 46.

In fact, Appellants note that even TURNER teaches against the Examiner's interpretation. As is expressly disclosed at column 1, lines 52 - 66,

[t]he top ply is formed between two forming wires along a gently undulating path where the dewatering process is carried out through both its faces to produce a web which has a more uniform distribution of fines, fillers and fibers on both its sides, thus providing its surfaces with a greater affinity for ply bonding. This dewatering through both sides not only produces a more uniform, one-sided web (i.e., a web wherein both sides are more nearly the same after the dewatering process), but in addition, this degree of dewatering of the top ply is accomplished quickly so it can have a higher caliper and still be brought into ply bonding contact with the surface of the base ply which may be formed on an ordinary fourdrinier-type papermaking machine. [emphasis added].

Thus, Appellants submit that, as TURNER expressly discloses an intention to produce a *uniform web* in which *both* sides are *more nearly the same* after dewatering, the Examiner's assertions of anticipation are contrary to the express disclosure of the applied document.

Further, Appellants note that, while the surfaces of the individual layers to be couched together according to the instant invention may have a higher fines content than filler content, in order to anticipate the instant invention TURNER must disclose every recited feature of the invention, including that each layer has a higher fines content on one side, and that the sides with the higher fines content are couched together in a couching zone, as recited in at least independent claim 46.

Moreover, Appellants note that, by expressly disclosing an intention to "produce a web having a *more uniform distribution* of fines, fillers and fibers *on both sides*, thus providing *its surfaces* with a greater affinity for ply bonding," [emphasis added]. (TURNER, column 1, lines

54 - 57), TURNER fails to provide articulable reasoning for couching together surfaces of individual plies having a higher fines content than its opposite ply surface. In other words, as TURNER's expressed intent of a *uniform distribution of fines, fillers, and fibers on both sides* is contrary to forming individual plies having a higher fines content on one surface as compared to its other surface, as recited in the pending claims, Appellants submit that TURNER fails to provide any disclosure of an apparatus or process for couching together the surfaces of each ply having a higher content of fines than its other ply surface, as recited in at least independent claim 46. Instead, the only guidance to the practitioner in the art provided by TURNER is that, in the production of a layered web, *both surfaces* of each ply are formed to be uniform and essentially the same, i.e., with a higher content of fines to fillers, so that each surface of each ply is provided with a greater affinity for ply bonding.

Further, Appellants submit capability of the apparatus to be configured to operate in a manner commensurate with the invention recited in at least independent claim 46 is not sufficient a sufficient showing for obviousness, unless the prior art provides some specific or articulable reasoning for so reconfiguring the TURNER apparatus. As reconfiguring the TURNER apparatus to be commensurate with the instant invention would require that TURNER be operated in a manner against the express disclosure of TURNER, Appellants submit no proper modification of TURNER can arguably render unpatentable the invention recited in at least independent claim 46.

Thus, Appellants submit that, as TURNER fails to disclose or even arguably suggest the combination of features recited in the pending claims. Thus, Appellants submit the Examiner has failed to provide any adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and no proper modification of TURNER arguably renders unpatentable under

35 U.S.C. § 103(a) the combination of features recited in at least independent claim 46. Thus, Appellants submit that the instant rejection is improper and should be withdrawn.

Referring again to Remand from the Board, Appellants acknowledge they have made no assertions regarding TURNER's capability or incapability of operating in the manner recited in the pending claims. Appellants submit they have no duty to show the prior art incapable of operating in the manner recited unless the Examiner presents a *prima facie* case that TURNER is in fact capable of operating in the manner of the pending claims, which he has not done. Appellants submit, by the instant action the Examiner has not provide such a *prima facie* case that TURNER is capable of operating as the instant invention, nor has the Examiner even arguably addressed the Appellants' arguments that TURNER teaches against the asserted modification.

Thus, should the Examiner address this portion of the Board's remand in the Examiner's Answer, which Appellants submit he cannot, Appellants will certainly address the Examiner's position and point out the Examiner's position wholly contradicts the express disclosure of TURNER.

Because TURNER fails to disclose or suggest at least the above-noted features Appellants submit that the applied art fails to disclose each and every recited feature of the instant invention. Accordingly, Appellants submit that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) or of obviousness under 35 U.S.C. § 103(a), such that the instant rejections are improper and should be withdrawn.

Further still, Appellants submit that even if it is considered that the prior art document

anticipates or renders unpatentable the invention recited in at least independent claim 46, which Appellants submit it does not, the applied art fails to anticipate or render obvious the various recited parameters of the formers and/or their arrangement within the apparatus for producing the multilayered web in accordance with the features of the instant invention. Thus, Appellants submit that claims 47 and 74 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. Moreover, Appellants further submit that claim 74 is separately patentable over TURNER. In particular, Appellants submit that TURNER fails to anticipate, *inter alia*, uniform pressure dewatering elements for web dewatering, as recited in claim 74.

Accordingly, Appellants request that the Board reverse the Examiner's decision to twice reject claims 46, 47, and 74 under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a), and that the application be remanded to the Examiner for withdrawal of the rejection over TURNER and an early allowance of all claims on appeal.

**(B) The Rejection of Claims 48 – 97 Under 35 U.S.C. § 103(a) as being Unpatentable Over TURNER, further evidenced by U.S. Patent Nos. 3,378,435; 5,607,551; 5,238,534; and GB 2,283,766 is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that, while TURNER fails to disclose various recited features of the instant invention, the Examiner asserts that these features are functionally equivalent element and the use of one for the other would have been obvious. Further, the Examiner notes column 1, lines 39 – 46 in support of his assertions of obviousness. Appellants traverse the Examiner's assertions.

*Independent claim 53:*

Appellants' independent claim 53 recites, *inter alia*, at least two formers for forming at least two layers in which each layer has a higher content of fines on one side respectively, a couching zone in which the at least two layers are couched together such that each layer's side having a higher content of fines contact each other, wherein at least one of the at least two formers comprises at least one gap former including two circulating continuous dewatering belts convergingly arranged to form a headbox nip, and in which said dewatering belts are guided in an area of said headbox nip over a forming element, and a headbox arranged to supply a fibrous suspension to said headbox nip, such that said at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side, and the web travel directions of said first and second gap formers are opposite each other, and a first layer created in said first gap former is guided together with at least one of said two dewatering belts around a

deflection element, and then introduced via a continuous belt, traveling in a generally opposite direction to a stream direction of said headbox, into said couching zone in which the first layer and a second layer formed by said second gap former are couched together so that their sides having a higher content of fines come into contact with each other. Appellants submit no proper modification of TURNER can render unpatentable the above-noted combination of features.

For the reasons set forth above, with regard to independent claim 46, Appellants submit TURNER fails to render unpatentable the invention recited in at least independent claim 53.

Appellants again note, while disclosing a multi-ply forming apparatus and process, TURNER fails to disclose a gap former arranged to produce a web layer having one side with higher fines content than the other, and, therefore, certainly fails to disclose joining the sides of the layers having the higher fines content together, as recited in at least independent claim 53. That is, because TURNER provides no disclosure that each web layer is formed to have one side with a higher fines content than the other, Appellants submit that the Examiner's assertions that TURNER is structurally the same as the recited invention is without basis in the art of record.

Further, notwithstanding the Examiner's annotation on Figure 1 of TURNER that most fines are at the higher dewatering side of a gap former, this does not comport with TURNER's specific disclosure on column 2, lines 12 - 18 that "by dewatering through both surfaces of both the top and bottom plies, formation of the individual plies is accomplished faster and, equally important, the ply faces which come into ply bonding engagement are better prepared, by virtue of having more fines and less fillers at their surface, to remain permanently bonded together." Appellants submit TURNER's disclosure, absent any prejudice based upon prior review and consideration of Appellants' disclosure, merely provides that the bonding surfaces have more



finer than fillers, not that one bonding surface of the layers has a higher fines content than its opposite surface.

Further, while the Examiner now refers to column 1, lines 39 – 45 of TURNER in support of his assertions of anticipation or obviousness, Appellants note this passage only supports the rejection when read in light of Appellants' own disclosure. That is, while TURNER discloses

where either or both of the mating plies contain an abundance of fines, which promote ply bonding, excessive speed in the rate of water removal through the faces of the plies to be mated adversely affects ply bonding because it tends to draw a greater amount of fillers to the surface,

there is no arguable disclosure of one side having more fines than the other, as recited in the pending claims. TURNER merely discloses an abundance of fines, in relation to fillers, is advantageous to bonding. Further, as TURNER also indicates this abundance of fines cannot be achieved under excessive speed in the water removal, Appellants submit TURNER fails to anticipate or render obvious the invention recited in at least independent claim 53.

Appellants note, rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *WL Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that

knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

In view of the above, it is apparent that TURNER fails to disclose an arrangement in which surfaces of the web layers having the higher fines content than their opposite surfaces are couched together in a couching zone, as recited in the pending claims. That is, because TURNER fails to provide the necessary structure to form the web layers in the manner recited in at least independent claim 53, Appellants submit that TURNER cannot even arguably anticipate the recited feature that the sides having the higher fines content (not taught by TURNER) are couched together, as is likewise recited in claim 53.

As Appellants have maintained throughout the prosecution of this application, the Examiner has made certain assumptions of the TURNER apparatus based upon the disclosure in the instant application, which are not based upon any specific teaching presented in TURNER. In particular, Appellants note that the Examiner continues to construe the disclosure of TURNER in view of Appellants' own disclosure, instead of interpreting the disclosure of TURNER in light of that which was known to those ordinarily skilled in the art at the time of the instant invention.

Appellants further submit the Examiner's attempted explanation of TURNER's capability to operate in the manner set forth in the pending claims is likewise tainted by the Examiner's review of Appellants' own disclosure. Appellants submit it is not enough that the Examiner can rearrange the disclosed features/elements of TURNER to reproduce the Appellants' invention, but there must be some articulable motivation or rationale in the applied art for rearranging the disclosed features in the manner suggested by the Examiner. Appellants submit the burden on the Examiner is even higher in the instant application because the Examiner must show some

reason for modifying TURNER that is contrary to the express disclosure of TURNER, i.e., to provide a uniform distribution.

Thus, Appellants continue to point out, as the Examiner's continued (mis)interpretation of TURNER is based solely upon review of the instant application and claims, the asserted rejection is not based upon the disclosure of TURNER. In particular, TURNER fails to disclose an arrangement or process to form one side of a web layer with a higher fines content than the other side, and no disclosure of an arrangement or process in which sides of web layers having higher fines contents than their other sides are couched together, as recited in the independent claims. Thus, Appellants submit that the rejection is improper and should be withdrawn.

In contrast to the instant invention, TURNER specifically discloses an apparatus specially designed to join together ply faces that have "more fines and less fillers at their surface," and that this objective is achieved through dewatering both surfaces of each ply. (TURNER, column 2, lines 12 - 18). Moreover, there is no teaching or suggestion, either in TURNER or any other applied document of record, to support an assertion TURNER is capable of operating in the manner recited in the pending claims. In this regard, TURNER provides absolutely no disclosure regarding that comparative amounts of fines between opposite sides of the web. Thus, Appellants submit that the only reasonable interpretation of TURNER's disclosure, when considering only the disclosure of TURNER, is that the surfaces of each ply to be joined are dewatered so that the surfaces to be joined are formed to contain a higher content of fines than a content of fillers.

However, Appellants submit that ply surfaces having a higher fines to fillers content is not the same as a ply having one surface with a higher fines content than the other surface, which is recited in Appellants' claims.

Moreover, because TURNER fails to provide any teaching or suggestion of a comparative fines content between opposite sides of a same ply, Appellants submit that there is no teaching in TURNER to even arguably interpret that web plies are formed to have a higher fines content on one side than the other side, or that the sides of web plies having the higher fines content are couched together, as recited in at least independent claim 53.

In fact, Appellants note that even TURNER teaches against the Examiner's interpretation. As is expressly disclosed at column 1, lines 52 - 66,

[t]he top ply is formed between two forming wires along a gently undulating path where the dewatering process is carried out through both its faces to produce a web which has a more uniform distribution of fines, fillers and fibers on both its sides, thus providing its surfaces with a greater affinity for ply bonding. This dewatering through both sides not only produces a more uniform, one-sided web (i.e., a web wherein both sides are more nearly the same after the dewatering process), but in addition, this degree of dewatering of the top ply is accomplished quickly so it can have a higher caliper and still be brought into ply bonding contact with the surface of the base ply which may be formed on an ordinary fourdrinier-type papermaking machine. [emphasis added].

Thus, Appellants submit that, as TURNER expressly discloses an intention to produce a uniform web in which both sides are more nearly the same after dewatering, the Examiner's assertions of anticipation are contrary to the express disclosure of the applied document.

Further, Appellants note that, while the surfaces of the individual layers to be couched together according to the instant invention may have a higher fines content than filler content, in order to anticipate the instant invention TURNER must disclose every recited feature of the invention, including that each layer has a higher fines content on one side, and that the sides with the higher fines content are couched together in a couching zone, as recited in at least independent claim 53.

Moreover, Appellants note that, by expressly disclosing an intention to “produce a web having a more uniform distribution of fines, fillers and fibers on both sides, thus providing its surfaces with a greater affinity for ply bonding,” [emphasis added]. (TURNER, column 1, lines 54 - 57), TURNER fails to provide articulable reasoning for couching together surfaces of individual plies having a higher fines content than its opposite ply surface. In other words, as TURNER’s expressed intent of a uniform distribution of fines, fillers, and fibers on both sides is contrary to forming individual plies having a higher fines content on one surface as compared to its other surface, as recited in the pending claims, Appellants submit that TURNER fails to provide any disclosure of an apparatus or process for couching together the surfaces of each ply having a higher content of fines than its other ply surface, as recited in at least independent claim 53. Instead, the only guidance to the practitioner in the art provided by TURNER is that, in the production of a layered web, both surfaces of each ply are formed to be uniform and essentially the same, i.e., with a higher content of fines to fillers, so that each surface of each ply is provided with a greater affinity for ply bonding.

Further, Appellants submit capability of the apparatus to be configured to operate in a manner commensurate with the invention recited in at least independent claim 75 is not sufficient a sufficient showing for obviousness, unless the prior art provides some specific or articulable reasoning for so reconfiguring the TURNER apparatus. As reconfiguring the TURNER apparatus to be commensurate with the instant invention would require that TURNER be operated in a manner against the express disclosure of TURNER, Appellants submit no proper modification of TURNER can arguably render unpatentable the invention recited in at least independent claim 75.

Thus, Appellants submit that, as TURNER fails to disclose or even arguably suggest the combination of features recited in the pending claims. Thus, Appellants submit the Examiner has failed to provide any adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and no proper modification of TURNER arguably renders unpatentable under 35 U.S.C. § 103(a) the combination of features recited in at least independent claim 53. Thus, Appellants submit that the instant rejection is improper and should be withdrawn.

Referring again to Remand from the Board, Appellants acknowledge they have made no assertions regarding TURNER's capability or incapability of operating in the manner recited in the pending claims. Appellants submit they have no duty to show the prior art incapable of operating in the manner recited unless the Examiner presents a prima facie case that TURNER is in fact capable of operating in the manner of the pending claims, which he has not done. Appellants submit, by the instant action the Examiner has not provide such a prima facie case that TURNER is capable of operating as the instant invention, nor has the Examiner even arguably addressed the Appellants' arguments that TURNER teaches against the asserted modification.

Thus, should the Examiner address this portion of the Board's remand in the Examiner's Answer, which Appellants submit he cannot, Appellants will certainly address the Examiner's position and point out the Examiner's position wholly contradicts the express disclosure of TURNER.

Because TURNER fails to disclose or suggest at least the above-noted features Appellants submit that the applied art fails to disclose each and every recited feature of the instant invention. Accordingly, Appellants submit that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) or of

obviousness under 35 U.S.C. § 103(a), such that the instant rejections are improper and should be withdrawn.

While the Examiner has made sweeping unsubstantiated assertions regarding the interchangeability of various formers, he has not provided any teaching or suggestion why it would have been obvious or even possible for these formers to produce a web layer having a higher content of fines on one side, as is recited in the pending claims. By way of example, Appellants note that, while TURNER discloses a former that includes two converging forming wires, the crescent former of U.S. Patent No. 3,378,435 includes a forming wire and a felt arranged to converge. Thus, as the two formers are structurally distinct from each other, Appellants submit that it is not apparent that substituting a crescent former for the former of TURNER would enable TURNER to operate in its intended manner, i.e., there is no teaching or suggestion in the art of record that the crescent former forms a layer having a bonding surface with a higher content of fines than fillers, as required by TURNER. Similar defects arise with the Examiner's other baseless assertions of obviousness.

Because it is not apparent from the art of record that the crescent former (or any other type of former) will enable TURNER to operate in its intended manner, Appellants submit that the art of record fails to provide the necessary motivation or rationale for combining the applied art in the manner asserted by the Examiner.

Moreover, because the Examiner has not shown that it would have been apparent from the disclosure TURNER to form the web layers having one side with a higher fines content than the other side, Appellants submit that there is certainly no suggestion of an arrangement in which sides of web layers having the higher fines content are couched together in a couching zone, as recited in at least independent claims 53.

As alluded to above, Appellants note that the Examiner has not provided any documentary evidence that changing the former of TURNER would not prevent TURNER from forming its intended web plies, i.e., to be uniform on each side with regard to fines, fillers and fibers, and to exhibit a higher content of fines than fillers on both sides of each ply. In other words, while, generally speaking, formers are utilized for similar purposes, i.e., to form and dewater the web, there is no teaching or suggestion that any of the formers noted by the Examiner would achieve the desired results of TURNER, and certainly no suggestion that these formers would operate in the manner recited in at least independent claims 46 and 75.

Moreover, Appellants submit that, if the desired results of TURNER are not achieved by the asserted modification, then it would not have been obvious to modify TURNER in the manner set forth by the Examiner. Further, Appellants note that it is the Examiner's burden to show that the asserted modification would not be contrary to the intended operation of TURNER, which the Examiner has not shown.

Of course, Appellants further submit that, even assuming, *arguendo*, that the art of record suggested that the asserted modification of TURNER enabled modified TURNER to operate in its intended manner (which Appellants submit it does not), such an apparatus or process, as discussed above, does not correspond to the apparatus and process recited in at least independent claims 53. Thus, notwithstanding whether the asserted modification is proper (which Appellants submit it is not), no proper modification of TURNER renders the instant invention obvious.

*Independent claim 75:*

Appellants independent claim 75 recites, *inter alia*, forming at least two layers via at least two formers, such that each layer has a side with a higher fines content, and couching together



the at least two layers in a couching zone so that the sides with higher fines content contact each other, such that wherein at least one of the at least two layers is formed by at least one gap former. Appellants submit no proper modification of TURNER can render unpatentable the above-noted combination of features.

For the reasons set forth above, with regard to independent claim 46, Appellants submit TURNER fails to render unpatentable the invention recited in at least independent claim 75.

Appellants again note, while disclosing a multi-ply forming apparatus and process, TURNER fails to disclose a gap former arranged to produce a web layer having one side with higher fines content than the other, and, therefore, certainly fails to disclose joining the sides of the layers having the higher fines content together, as recited in at least independent claim 75. That is, because TURNER provides no disclosure that each web layer is formed to have one side with a higher fines content than the other, Appellants submit that the Examiner's assertions that TURNER is structurally the same as the recited invention is without basis in the art of record.

Further, notwithstanding the Examiner's annotation on Figure 1 of TURNER that most fines are at the higher dewatering side of a gap former, this does not comport with TURNER's specific disclosure on column 2, lines 12 - 18 that "by dewatering through both surfaces of both the top and bottom plies, formation of the individual plies is accomplished faster and, equally important, the ply faces which come into ply bonding engagement are better prepared, by virtue of having more fines and less fillers at their surface, to remain permanently bonded together." Appellants submit TURNER's disclosure, absent any prejudice based upon prior review and consideration of Appellants' disclosure, merely provides that the bonding surfaces have more fines than fillers, not that one bonding surface of the layers has a higher fines content than its opposite surface.

Further, while the Examiner now refers to column 1, lines 39 – 45 of TURNER in support of his assertions of anticipation or obviousness, Appellants note this passage only supports the rejection when read in light of Appellants' own disclosure. That is, while TURNER discloses

where either or both of the mating plies contain an abundance of fines, which promote ply bonding, excessive speed in the rate of water removal through the faces of the plies to be mated adversely affects ply bonding because it tends to draw a greater amount of fillers to the surface,

there is no arguable disclosure of one side having more fines than the other, as recited in the pending claims. TURNER merely discloses an abundance of fines, in relation to fillers, is advantageous to bonding. Further, as TURNER also indicates this abundance of fines cannot be achieved under excessive speed in the water removal, Appellants submit TURNER fails to anticipate or render obvious the invention recited in at least independent claim 75.

Appellants note, rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *WL. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

In view of the above, it is apparent that TURNER fails to disclose an arrangement in which surfaces of the web layers having the higher fines content than their opposite surfaces are couched together in a couching zone, as recited in the pending claims. That is, because TURNER fails to provide the necessary structure to form the web layers in the manner recited in at least independent claim 75, Appellants submit that TURNER cannot even arguably anticipate the recited feature that the sides having the higher fines content (not taught by TURNER) are couched together, as is likewise recited in claim 75.

As Appellants have maintained throughout the prosecution of this application, the Examiner has made certain assumptions of the TURNER apparatus based upon the disclosure in the instant application, which are not based upon any specific teaching presented in TURNER. In particular, Appellants note that the Examiner continues to construe the disclosure of TURNER in view of Appellants' own disclosure, instead of interpreting the disclosure of TURNER in light of that which was known to those ordinarily skilled in the art at the time of the instant invention.

Appellants further submit the Examiner's attempted explanation of TURNER's capability to operate in the manner set forth in the pending claims is likewise tainted by the Examiner's review of Appellants' own disclosure. Appellants submit it is not enough that the Examiner can rearrange the disclosed features/elements of TURNER to reproduce the Appellants' invention, but there must be some articulable motivation or rationale in the applied art for rearranging the disclosed features in the manner suggested by the Examiner. Appellants submit the burden on the Examiner is even higher in the instant application because the Examiner must show some reason for modifying TURNER that is contrary to the express disclosure of TURNER, i.e., to provide a uniform distribution.

Thus, Appellants continue to point out, as the Examiner's continued (mis)interpretation of TURNER is based solely upon review of the instant application and claims, the asserted rejection is not based upon the disclosure of TURNER. In particular, TURNER fails to disclose an arrangement or process to form one side of a web layer with a higher fines content than the other side, and no disclosure of an arrangement or process in which sides of web layers having higher fines contents than their other sides are couched together, as recited in the independent claims. Thus, Appellants submit that the rejection is improper and should be withdrawn.

In contrast to the instant invention, TURNER specifically discloses an apparatus specially designed to join together ply faces that have "more fines and less fillers at their surface," and that this objective is achieved through dewatering both surfaces of each ply. (TURNER, column 2, lines 12 - 18). Moreover, there is no teaching or suggestion, either in TURNER or any other applied document of record, to support an assertion TURNER is capable of operating in the manner recited in the pending claims. In this regard, TURNER provides absolutely no disclosure regarding that comparative amounts of fines between opposite sides of the web. Thus, Appellants submit that the only reasonable interpretation of TURNER's disclosure, when considering only the disclosure of TURNER, is that the surfaces of each ply to be joined are dewatered so that the surfaces to be joined are formed to contain a higher content of fines than a content of fillers.

However, Appellants submit that ply surfaces having a higher fines to fillers content is not the same as a ply having one surface with a higher fines content than the other surface, which is recited in Appellants' claims.

Moreover, because TURNER fails to provide any teaching or suggestion of a comparative fines content between opposite sides of a same ply, Appellants submit that there is no teaching in

TURNER to even arguably interpret that web plies are formed to have a higher fines content on one side than the other side, or that the sides of web plies having the higher fines content are couched together, as recited in at least independent claim 75.

In fact, Appellants note that even TURNER teaches against the Examiner's interpretation. As is expressly disclosed at column 1, lines 52 - 66,

[t]he top ply is formed between two forming wires along a gently undulating path where the dewatering process is carried out through both its faces to produce a web which has a more uniform distribution of fines, fillers and fibers on both its sides, thus providing its surfaces with a greater affinity for ply bonding. This dewatering through both sides not only produces a more uniform, one-sided web (i.e., a web wherein both sides are more nearly the same after the dewatering process), but in addition, this degree of dewatering of the top ply is accomplished quickly so it can have a higher caliper and still be brought into ply bonding contact with the surface of the base ply which may be formed on an ordinary fourdrinier-type papermaking machine. [emphasis added].

Thus, Appellants submit that, as TURNER expressly discloses an intention to produce a uniform web in which both sides are more nearly the same after dewatering, the Examiner's assertions of anticipation are contrary to the express disclosure of the applied document.

Further, Appellants note that, while the surfaces of the individual layers to be couched together according to the instant invention may have a higher fines content than filler content, in order to anticipate the instant invention TURNER must disclose every recited feature of the invention, including that each layer has a higher fines content on one side, and that the sides with the higher fines content are couched together in a couching zone, as recited in at least independent claim 75.

Moreover, Appellants note that, by expressly disclosing an intention to "produce a web having a more uniform distribution of fines, fillers and fibers on both sides, thus providing its surfaces with a greater affinity for ply bonding," [emphasis added]. (TURNER, column 1, lines

54 - 57), TURNER fails to provide articulable reasoning for couching together surfaces of individual plies having a higher fines content than its opposite ply surface. In other words, as TURNER's expressed intent of a uniform distribution of fines, fillers, and fibers on both sides is contrary to forming individual plies having a higher fines content on one surface as compared to its other surface, as recited in the pending claims, Appellants submit that TURNER fails to provide any disclosure of an apparatus or process for couching together the surfaces of each ply having a higher content of fines than its other ply surface, as recited in at least independent claim 75. Instead, the only guidance to the practitioner in the art provided by TURNER is that, in the production of a layered web, both surfaces of each ply are formed to be uniform and essentially the same, i.e., with a higher content of fines to fillers, so that each surface of each ply is provided with a greater affinity for ply bonding.

Further, Appellants submit capability of the apparatus to be configured to operate in a manner commensurate with the invention recited in at least independent claim 75 is not sufficient a sufficient showing for obviousness, unless the prior art provides some specific or articulable reasoning for so reconfiguring the TURNER apparatus. As reconfiguring the TURNER apparatus to be commensurate with the instant invention would require that TURNER be operated in a manner against the express disclosure of TURNER, Appellants submit no proper modification of TURNER can arguably render unpatentable the invention recited in at least independent claim 75.

Thus, Appellants submit that, as TURNER fails to disclose or even arguably suggest the combination of features recited in the pending claims. Thus, Appellants submit the Examiner has failed to provide any adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and no proper modification of TURNER arguably renders unpatentable under

35 U.S.C. § 103(a) the combination of features recited in at least independent claim 75. Thus, Appellants submit that the instant rejection is improper and should be withdrawn.

Referring again to Remand from the Board, Appellants acknowledge they have made no assertions regarding TURNER's capability or incapability of operating in the manner recited in the pending claims. Appellants submit they have no duty to show the prior art incapable of operating in the manner recited unless the Examiner presents a prima facie case that TURNER is in fact capable of operating in the manner of the pending claims, which he has not done. Appellants submit, by the instant action the Examiner has not provide such a prima facie case that TURNER is capable of operating as the instant invention, nor has the Examiner even arguably addressed the Appellants' arguments that TURNER teaches against the asserted modification.

Thus, should the Examiner address this portion of the Board's remand in the Examiner's Answer, which Appellants submit he cannot, Appellants will certainly address the Examiner's position and point out the Examiner's position wholly contradicts the express disclosure of TURNER.

Because TURNER fails to disclose or suggest at least the above-noted features Appellants submit that the applied art fails to disclose each and every recited feature of the instant invention. Accordingly, Appellants submit that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) or of obviousness under 35 U.S.C. § 103(a), such that the instant rejections are improper and should be withdrawn.

While the Examiner has made sweeping unsubstantiated assertions regarding the interchangeability of various formers, he has not provided any teaching or suggestion why it

would have been obvious or even possible for these formers to produce a web layer having a higher content of fines on one side, as is recited in the pending claims. By way of example, Appellants note that, while TURNER discloses a former that includes two converging forming wires, the crescent former of U.S. Patent No. 3,378,435 includes a forming wire and a felt arranged to converge. Thus, as the two formers are structurally distinct from each other, Appellants submit that it is not apparent that substituting a crescent former for the former of TURNER would enable TURNER to operate in its intended manner, i.e., there is no teaching or suggestion in the art of record that the crescent former forms a layer having a bonding surface with a higher content of fines than fillers, as required by TURNER. Similar defects arise with the Examiner's other baseless assertions of obviousness.

Because it is not apparent from the art of record that the crescent former (or any other type of former) will enable TURNER to operate in its intended manner, Appellants submit that the art of record fails to provide the necessary motivation or rationale for combining the applied art in the manner asserted by the Examiner.

Moreover, because the Examiner has not shown that it would have been apparent from the disclosure TURNER to form the web layers having one side with a higher fines content than the other side, Appellants submit that there is certainly no suggestion of an arrangement in which sides of web layers having the higher fines content are couched together in a couching zone, as recited in at least independent claims 46 and 75.

As alluded to above, Appellants note that the Examiner has not provided any documentary evidence that changing the former of TURNER would not prevent TURNER from forming its intended web plies, i.e., to be uniform on each side with regard to fines, fillers and fibers, and to exhibit a higher content of fines than fillers on both sides of each ply. In other



words, while, generally speaking, formers are utilized for similar purposes, i.e., to form and dewater the web, there is no teaching or suggestion that any of the formers noted by the Examiner would achieve the desired results of TURNER, and certainly no suggestion that these formers would operate in the manner recited in at least independent claims 46 and 75.

Moreover, Appellants submit that, if the desired results of TURNER are not achieved by the asserted modification, then it would not have been obvious to modify TURNER in the manner set forth by the Examiner. Further, Appellants note that it is the Examiner's burden to show that the asserted modification would not be contrary to the intended operation of TURNER, which the Examiner has not shown.

Of course, Appellants further submit that, even assuming, *arguendo*, that the art of record suggested that the asserted modification of TURNER enabled modified TURNER to operate in its intended manner (which Appellants submit it does not), such an apparatus or process, as discussed above, does not correspond to the apparatus and process recited in at least independent claims 46 and 75. Thus, notwithstanding whether the asserted modification is proper (which Appellants submit it is not), no proper modification of TURNER renders the instant invention obvious.

*Independent claim 81:*

Appellants' independent claim 81 recites, *inter alia*, forming at least two layers via at least two formers, such that each layer has a side with a higher fines content, couching together the at least two layers in a couching zone so that the sides with higher fines content contact each other, such that at least one of the at least two layers is formed by at least one gap former comprising two circulating continuous dewatering belts that run together forming a headbox nip

and which are guided in the area of the headbox nip, loaded with a fibrous suspension by a headbox, over a forming element, the at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side, and the first and second gap formers are operated in opposite web travel directions, and a first layer formed in the first gap former is guided together with at least one of the two dewatering belts around a deflection element, and then via a continuous belt is introduced in a direction generally opposite to the travel direction of a first headbox into the couching zone in which the first layer and a second layer formed by the second gap former are couched together so that their sides having a higher content of fines come into contact with each other. Appellants submit no proper modification of TURNER can render unpatentable the above-noted combination of features.

For the reasons set forth above, with regard to independent claim 46, Appellants submit TURNER fails to render unpatentable the invention recited in at least independent claim 81.

Appellants again note, while disclosing a multi-ply forming apparatus and process, TURNER fails to disclose a gap former arranged to produce a web layer having one side with higher fines content than the other, and, therefore, certainly fails to disclose joining the sides of the layers having the higher fines content together, as recited in at least independent claim 81. That is, because TURNER provides no disclosure that each web layer is formed to have one side with a higher fines content than the other, Appellants submit that the Examiner's assertions that TURNER is structurally the same as the recited invention is without basis in the art of record.

Further, notwithstanding the Examiner's annotation on Figure 1 of TURNER that most fines are at the higher dewatering side of a gap former, this does not comport with TURNER's specific disclosure on column 2, lines 12 - 18 that "by dewatering through both surfaces of both

the top and bottom plies, formation of the individual plies is accomplished faster and, equally important, the ply faces which come into ply bonding engagement are better prepared, by virtue of having more fines and less fillers at their surface, to remain permanently bonded together.” Appellants submit TURNER’s disclosure, absent any prejudice based upon prior review and consideration of Appellants’ disclosure, merely provides that the bonding surfaces have more fines than fillers, not that one bonding surface of the layers has a higher fines content than its opposite surface.

Further, while the Examiner now refers to column 1, lines 39 – 45 of TURNER in support of his assertions of anticipation or obviousness, Appellants note this passage only supports the rejection when read in light of Appellants’ own disclosure. That is, while TURNER discloses

where either or both of the mating plies contain an abundance of fines, which promote ply bonding, excessive speed in the rate of water removal through the faces of the plies to be mated adversely affects ply bonding because it tends to draw a greater amount of fillers to the surface,

there is no arguable disclosure of one side having more fines than the other, as recited in the pending claims. TURNER merely discloses an abundance of fines, in relation to fillers, is advantageous to bonding. Further, as TURNER also indicates this abundance of fines cannot be achieved under excessive speed in the water removal, Appellants submit TURNER fails to anticipate or render obvious the invention recited in at least independent claim 81.

Appellants note, rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or

hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *WL Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

In view of the above, it is apparent that TURNER fails to disclose an arrangement in which surfaces of the web layers having the higher fines content than their opposite surfaces are couched together in a couching zone, as recited in the pending claims. That is, because TURNER fails to provide the necessary structure to form the web layers in the manner recited in at least independent claim 81, Appellants submit that TURNER cannot even arguably anticipate the recited feature that the sides having the higher fines content (not taught by TURNER) are couched together, as is likewise recited in claim 81.

As Appellants have maintained throughout the prosecution of this application, the Examiner has made certain assumptions of the TURNER apparatus based upon the disclosure in the instant application, which are not based upon any specific teaching presented in TURNER. In particular, Appellants note that the Examiner continues to construe the disclosure of TURNER in view of Appellants' own disclosure, instead of interpreting the disclosure of TURNER in light of that which was known to those ordinarily skilled in the art at the time of the instant invention.

Appellants further submit the Examiner's attempted explanation of TURNER's capability to operate in the manner set forth in the pending claims is likewise tainted by the Examiner's review of Appellants' own disclosure. Appellants submit it is not enough that the Examiner can

rearrange the disclosed features/elements of TURNER to reproduce the Appellants' invention, but there must be some articulable motivation or rationale in the applied art for rearranging the disclosed features in the manner suggested by the Examiner. Appellants submit the burden on the Examiner is even higher in the instant application because the Examiner must show some reason for modifying TURNER that is contrary to the express disclosure of TURNER, i.e., to provide a uniform distribution.

Thus, Appellants continue to point out, as the Examiner's continued (mis)interpretation of TURNER is based solely upon review of the instant application and claims, the asserted rejection is not based upon the disclosure of TURNER. In particular, TURNER fails to disclose an arrangement or process to form one side of a web layer with a higher fines content than the other side, and no disclosure of an arrangement or process in which sides of web layers having higher fines contents than their other sides are couched together, as recited in the independent claims. Thus, Appellants submit that the rejection is improper and should be withdrawn.

In contrast to the instant invention, TURNER specifically discloses an apparatus specially designed to join together ply faces that have "more fines and less fillers at their surface," and that this objective is achieved through dewatering both surfaces of each ply. (TURNER, column 2, lines 12 - 18). Moreover, there is no teaching or suggestion, either in TURNER or any other applied document of record, to support an assertion TURNER is capable of operating in the manner recited in the pending claims. In this regard, TURNER provides absolutely no disclosure regarding that comparative amounts of fines between opposite sides of the web. Thus, Appellants submit that the only reasonable interpretation of TURNER's disclosure, when considering only the disclosure of TURNER, is that the surfaces of each ply to be joined are

dewatered so that the surfaces to be joined are formed to contain a higher content of fines than a content of fillers.

However, Appellants submit that ply surfaces having a higher fines to fillers content is not the same as a ply having one surface with a higher fines content than the other surface, which is recited in Appellants' claims.

Moreover, because TURNER fails to provide any teaching or suggestion of a comparative fines content between opposite sides of a same ply, Appellants submit that there is no teaching in TURNER to even arguably interpret that web plies are formed to have a higher fines content on one side than the other side, or that the sides of web plies having the higher fines content are couched together, as recited in at least independent claim 81.

In fact, Appellants note that even TURNER teaches against the Examiner's interpretation. As is expressly disclosed at column 1, lines 52 - 66,

[t]he top ply is formed between two forming wires along a gently undulating path where the dewatering process is carried out through both its faces to produce a web which has a more uniform distribution of fines, fillers and fibers on both its sides, thus providing its surfaces with a greater affinity for ply bonding. This dewatering through both sides not only produces a more uniform, one-sided web (i.e., a web wherein both sides are more nearly the same after the dewatering process), but in addition, this degree of dewatering of the top ply is accomplished quickly so it can have a higher caliper and still be brought into ply bonding contact with the surface of the base ply which may be formed on an ordinary fourdrinier-type papermaking machine. [emphasis added].

Thus, Appellants submit that, as TURNER expressly discloses an intention to produce a uniform web in which both sides are more nearly the same after dewatering, the Examiner's assertions of anticipation are contrary to the express disclosure of the applied document.

Further, Appellants note that, while the surfaces of the individual layers to be couched together according to the instant invention may have a higher fines content than filler content, in

order to anticipate the instant invention TURNER must disclose every recited feature of the invention, including that each layer has a higher fines content on one side, and that the sides with the higher fines content are couched together in a couching zone, as recited in at least independent claim 81.

Moreover, Appellants note that, by expressly disclosing an intention to “produce a web having a more uniform distribution of fines, fillers and fibers on both sides, thus providing its surfaces with a greater affinity for ply bonding,” [emphasis added]. (TURNER, column 1, lines 54 - 57), TURNER fails to provide articulable reasoning for couching together surfaces of individual plies having a higher fines content than its opposite ply surface. In other words, as TURNER’s expressed intent of a uniform distribution of fines, fillers, and fibers on both sides is contrary to forming individual plies having a higher fines content on one surface as compared to its other surface, as recited in the pending claims, Appellants submit that TURNER fails to provide any disclosure of an apparatus or process for couching together the surfaces of each ply having a higher content of fines than its other ply surface, as recited in at least independent claim 81. Instead, the only guidance to the practitioner in the art provided by TURNER is that, in the production of a layered web, both surfaces of each ply are formed to be uniform and essentially the same, i.e., with a higher content of fines to fillers, so that each surface of each ply is provided with a greater affinity for ply bonding.

Further, Appellants submit capability of the apparatus to be configured to operate in a manner commensurate with the invention recited in at least independent claim 81 is not sufficient a sufficient showing for obviousness, unless the prior art provides some specific or articulable reasoning for so reconfiguring the TURNER apparatus. As reconfiguring the TURNER apparatus to be commensurate with the instant invention would require that TURNER be

operated in a manner against the express disclosure of TURNER, Appellants submit no proper modification of TURNER can arguably render unpatentable the invention recited in at least independent claim 81.

Thus, Appellants submit that, as TURNER fails to disclose or even arguably suggest the combination of features recited in the pending claims. Thus, Appellants submit the Examiner has failed to provide any adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and no proper modification of TURNER arguably renders unpatentable under 35 U.S.C. § 103(a) the combination of features recited in at least independent claim 81. Thus, Appellants submit that the instant rejection is improper and should be withdrawn.

Referring again to Remand from the Board, Appellants acknowledge they have made no assertions regarding TURNER's capability or incapability of operating in the manner recited in the pending claims. Appellants submit they have no duty to show the prior art incapable of operating in the manner recited unless the Examiner presents a prima facie case that TURNER is in fact capable of operating in the manner of the pending claims, which he has not done. Appellants submit, by the instant action the Examiner has not provide such a prima facie case that TURNER is capable of operating as the instant invention, nor has the Examiner even arguably addressed the Appellants' arguments that TURNER teaches against the asserted modification.

Thus, should the Examiner address this portion of the Board's remand in the Examiner's Answer, which Appellants submit he cannot, Appellants will certainly address the Examiner's position and point out the Examiner's position wholly contradicts the express disclosure of TURNER.



Because TURNER fails to disclose or suggest at least the above-noted features Appellants submit that the applied art fails to disclose each and every recited feature of the instant invention. Accordingly, Appellants submit that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) or of obviousness under 35 U.S.C. § 103(a), such that the instant rejections are improper and should be withdrawn.

While the Examiner has made sweeping unsubstantiated assertions regarding the interchangeability of various formers, he has not provided any teaching or suggestion why it would have been obvious or even possible for these formers to produce a web layer having a higher content of fines on one side, as is recited in the pending claims. By way of example, Appellants note that, while TURNER discloses a former that includes two converging forming wires, the crescent former of U.S. Patent No. 3,378,435 includes a forming wire and a felt arranged to converge. Thus, as the two formers are structurally distinct from each other, Appellants submit that it is not apparent that substituting a crescent former for the former of TURNER would enable TURNER to operate in its intended manner, i.e., there is no teaching or suggestion in the art of record that the crescent former forms a layer having a bonding surface with a higher content of fines than fillers, as required by TURNER. Similar defects arise with the Examiner's other baseless assertions of obviousness.

Because it is not apparent from the art of record that the crescent former (or any other type of former) will enable TURNER to operate in its intended manner, Appellants submit that the art of record fails to provide the necessary motivation or rationale for combining the applied art in the manner asserted by the Examiner.

Moreover, because the Examiner has not shown that it would have been apparent from the disclosure TURNER to form the web layers having one side with a higher fines content than the other side, Appellants submit that there is certainly no suggestion of an arrangement in which sides of web layers having the higher fines content are couched together in a couching zone, as recited in at least independent claim 81.

As alluded to above, Appellants note that the Examiner has not provided any documentary evidence that changing the former of TURNER would not prevent TURNER from forming its intended web plies, i.e., to be uniform on each side with regard to fines, fillers and fibers, and to exhibit a higher content of fines than fillers on both sides of each ply. In other words, while, generally speaking, formers are utilized for similar purposes, i.e., to form and dewater the web, there is no teaching or suggestion that any of the formers noted by the Examiner would achieve the desired results of TURNER, and certainly no suggestion that these formers would operate in the manner recited in at least independent claim 81.

Moreover, Appellants submit that, if the desired results of TURNER are not achieved by the asserted modification, then it would not have been obvious to modify TURNER in the manner set forth by the Examiner. Further, Appellants note that it is the Examiner's burden to show that the asserted modification would not be contrary to the intended operation of TURNER, which the Examiner has not shown.

Of course, Appellants further submit that, even assuming, arguendo, that the art of record suggested that the asserted modification of TURNER enabled modified TURNER to operate in its intended manner (which Appellants submit it does not), such an apparatus or process, as discussed above, does not correspond to the apparatus and process recited in at least independent

claims 81. Thus, notwithstanding whether the asserted modification is proper (which Appellants submit it is not), no proper modification of TURNER renders the instant invention obvious.

*Dependent claims:*

Further, Appellants submit that even if it is considered that the prior art documents render unpatentable the invention recited in the independent claims, which Appellants submit they do not, the applied documents fail to anticipate the various recited parameters of the formers and/or their arrangement within the apparatus for producing the multilayered web in accordance with the features of the instant invention. Thus, Appellants submit that claims 48 – 52, 54 – 74, 76 – 80, and 82 – 97 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention.

Moreover, Appellants further submit that claims 48 – 52, 54 – 74, 76 – 80, and 82 – 97 are separately patentable TURNER, either alone or in any proper combination with the other applied documents of record. In particular, Appellants submit that TURNER fails to teach or suggest, *inter alia*, said at least one gap former comprises *two circulating continuous dewatering belts* convergingly arranged to form a headbox nip, and in which said dewatering belts are guided in an area of said headbox nip *over a forming element*, as recited in claim 48; a headbox arranged to supply a fibrous suspension to said headbox nip, as recited in claim 49; said forming element comprises a forming roll, as recited in claim 50; said at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein *the higher content of fines side of said at least two layers occurs on a forming element side*, as recited in claim 51; *the web travel directions of said first and second gap formers are opposite each other*, as recited

in claim 52; said deflection element comprises a deflection roll, as recited in claim 54; the *first layer is guided around said deflection element together with an outer dewatering belt of said two dewatering belts*, which does not come into contact with said forming element, and which is introduced into said couching zone via said outer dewatering belt, as recited in claim 55; said *two dewatering belts are guided around said deflection element, and an inner dewatering belt of said two dewatering belts is separated from said outer dewatering belt which entrains the first layer following said deflection element*, as recited in claim 56; said outer dewatering belt of said first gap former is guided in a generally horizontal direction, at least up to said couching zone, as recited in claim 57; further comprising a fourdrinier former, *wherein a third layer is created by said fourdrinier former and sheet formation of the third layer occurs with the higher content of fines on an outer side of the third layer facing away from said continuous belt*, the first layer is guided over said deflection element and is couched together with the third layer, and the first layer and third layer are introduced via said continuous belt into said couching zone in which the first layer and second layers, are couched together so that their *sides having higher content of fines come into contact with each other*, as recited in claim 58; said outer dewatering belt of said first gap former is separated in web travel direction in front of said deflection element from an inner dewatering belt and the first layer is guided around said deflection element only together with said inner dewatering belt, as recited in claim 59; the *third layer and the first layer are couched together* in the area of at least one of said deflection element and in a couching roll, as recited in claim 60; after separation of said two dewatering belts of said second gap former, the second layer is introduced together with said outer dewatering belt into said couching zone in which the first and second layers are couched together so that their *sides having a higher content of fines come into contact with each other*, as recited in claim 61; a first layer of the at least two

layers to be couched together, is created by a fourdrinier former and sheet formation of the first layer occurs with *the higher content of fines on an outer side facing away from a continuous wire*, and wherein a second layer is created by said at least one gap former and sheet formation occurs in the second layer with *a higher content of fines on the forming element side*, as recited in claim 62; a stream direction of a headbox associated with said first gap former correlates in general with the travel direction of the first layer created by said fourdrinier former, as recited in claim 63; the second layer created by said at least one gap former is introduced, after a separation of said two dewatering belts of said at least one gap former, together with said outer dewatering belt into said couching zone in which the *second layer is joined with said continuous belt for the first and second layers to be couched together*, as recited in claim 64; said continuous wire is guided in said couching zone in a generally horizontal direction, as recited in claim 65; a second gap former arranged to form a third layer, wherein sheet formation of the third layer occurs with *a higher content of fines on a forming element side*, and wherein the third layer is couched together with the second layer in a second couching zone, as recited in claim 66; the stream direction of a headbox associated with said second gap former corresponds to the travel direction of the first layer created by said fourdrinier former, as recited in claim 67; the *third layer is introduced after separation of said two dewatering belts of said second gap former together with said outer dewatering belt into said second couching zone, wherein the second layer is brought together with said continuous belt for couching together the second and third layers formed by said first and second gap formers*, as recited in claim 68; said continuous wire is guided at least in the area of said couching zones in a generally horizontal direction, as recited in claim 69; *at least one additional gap former* arranged for the formation of an at least three-layered fibrous web, wherein sheet formation of the additional layer occurs with *a higher content of fines on the*

*forming element side*, wherein the additional layer is couched in an additional couching zone with one of the at least two layers formed by the first or second gap former, and where at least one of the at least two layers is couched together with the additional layer so that their *sides having higher content of fines come into contact with each other*, as recited in claim 70; the stream direction of said head box associated with said at least one additional gap former corresponds to the travel direction of the fibrous web to be created, as recited in claim 71; at least one of a multi-layered headbox and a single layered headbox is provided, as recited in claim 72; at least one single layered headbox is provided, as recited in claim 73; further comprising *uniform pressure dewatering elements for web dewatering*, as recited in claim 74; the fibrous web comprises one of a paper web or a cardboard web, as recited in claim 76; the at least one gap former comprises *two circulating continuous dewatering belts* that run together forming a headbox nip and which are guided in the area of the headbox nip, loaded with a fibrous suspension by a headbox, over a forming element, as recited in claim 77; the *forming element* comprises a forming roll, as recited in claim 78; the at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein *the higher content of fines side of said at least two layers occurs on a forming element side*, as recited in claim 79; the first and second gap formers are *operated in opposite web travel directions*, as recited in claim 80; the deflection element comprises a *deflection roll*, as recited in claim 82; the first layer created in the first gap former is guided together with an outer dewatering belt, which does not come into contact with the forming element, around the deflection element and introduced into the couching zone via the outer dewatering belt, as recited in claim 83; the *two dewatering belts are guided around the deflection element* and the an dewatering belt is separated from the outer dewatering belt entraining the layer consecutive to the deflection element, as recited in claim 84;

*a third layer is created by a fourdrinier former and sheet formation of the third layer occurs with the higher content of fines on an outer side facing away from the continuous belt; wherein the first layer is guided over the deflection element and is couched together with the third layer formed by the fourdrinier former, and the first and third layers are introduced via the continuous belt into the couching zone in which the layers formed by the first and third formers are couched together so that their sides having a higher content of fines come into contact with each other, as recited in claim 85; the outer dewatering belt of the first gap former is separated in web travel direction in front of the deflection element from the inner dewatering belt and the first layer is guided around the deflection element only together with the inner dewatering belt, as recited in claim 86; the third layer and the first layer formed in the first gap former are couched together in the area of at least one of the deflection element and a couching roll, as recited in claim 87; the second layer is guided after the separation of the two dewatering belts of the second gap former together with the outer dewatering belt to the couching zone, in which the first and second layers are couched together so that their sides of higher content of fines come into contact with each other, as recited in claim 88; the first of the at least two layers to be couched together is created by a fourdrinier former and sheet formation of the first layer occurs with a higher content of fines on the outside facing away from the continuous wire, and the second layer is created by the at least one gap former and sheet formation occurs in the second layer with a higher content of fines on a forming element side, as recited in claim 89; the stream direction of a head box associated with the first gap former correlates in general with the travel direction of the first layer created by the fourdrinier former, as recited in claim 90; the second layer created by the at least one gap former is guided to the couching zone after separation of the two dewatering belts of the at least one gap former together with the outer dewatering belt, in which the second layer is*

joined together with the continuous belt for the first and second layers to be couched together, as recited in claim 91; *a second gap former is arranged to form a third layer* wherein sheet formation of the third layer occurs with a *higher content of fines on the forming element side*, and wherein the third layer is couched together with the second layer in a second couching zone, as recited in claim 92; the stream direction of a headbox associated with the second gap former corresponds to the travel direction of the first layer formed by the fourdrinier former, as recited in claim 93; the third layer is introduced after separation of the two dewatering belts of the second gap former together with the outer dewatering belt into the second couching zone in which it is brought together with the continuous belt for the couching of the second and third layer formed by the first and second gap formers, as recited in claim 94; at least one additional gap former is arranged for the formation of an *at least three-layered fibrous web*, wherein sheet formation of the additional layer occurs with a *higher content of fines on the forming element side*, wherein the additional layer is couched in an additional couching zone with one of the at least two layers formed by the first or second gap former, and where at least one of the at least two layers is couched together with the additional layer so that their sides *having higher content of fines come into contact with each other*, as recited in claim 95; the stream direction of a headbox associated with the additional gap former corresponds to the travel direction of the fibrous web to be created, as recited in claim 96; and at least one of a multi-layered headbox and single-layered headbox is used, as recited in claim 97.

Accordingly, Appellants request that the Board reverse the Examiner's decision to finally reject claims 48 – 97 under 35 U.S.C. § 103(a), and that the application be remanded to the Examiner for withdrawal of the rejection over TURNER and an early allowance of all claims on appeal.



**(C) Conclusion**

Claims 46, 47, and 74 are patentable under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) over TURNER; and claims 48 – 97 under 35 U.S.C. § 103(a) over TURNER, further evidenced by U.S. Patent Nos. 3,378,435; 5,607,551; 5,238,534; and GB 2,283,766. Specifically, the applied art of record fails to anticipate or render unpatentable the invention recited in Appellants' claims 46 – 97. Accordingly, Appellants respectfully request that the Board reverse the outstanding rejections of the claims 46, 47, and 74 under 35 U.S.C. § 102(b)/35 U.S.C. § 103(a) and of claims 48 – 97 under 35 U.S.C. § 103(a), and remand the application to the Examiner for withdrawal of the rejections and allowance of the application.

Thus, Appellants respectfully submit that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a), and that the present application and each pending claim are allowable over the prior art of record.

Respectfully submitted,  
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Attachments: Claims Appendix  
Evidence Appendix  
Related Proceedings Appendix

**(8) CLAIMS APPENDIX**

The following listing of claims is a listing of all pending claims on appeal in the instant application:

**Listing of Claims**

46. (Previously presented) A machine for the production of a multi-layered fibrous web, comprising:

at least two formers for forming at least two layers in which each layer has a higher content of fines on one side respectively; and

a couching zone in which the at least two layers are couching together such that each layer's side having a higher content of fines contact each other;

wherein at least one of the at least two formers comprises at least one gap former.

47. (Previously presented) The machine according to claim 46, wherein the fibrous web comprises one of a paper web and cardboard web.

48. (Previously presented) The machine according to claim 46, wherein said at least one gap former comprises two circulating continuous dewatering belts convergingly arranged to form a headbox nip, and in which said dewatering belts are guided in an area of said headbox nip over a forming element.

49. (Previously presented) The machine according to claim 48, further comprising a headbox arranged to supply a fibrous suspension to said headbox nip.

50. (Previously presented) The machine according to claim 48, wherein said forming element comprises a forming roll.

51. (Previously presented) The machine according to claim 49, wherein said at least one gap former comprises a first gap former and a second gap former arranged to form at least two

layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side.

52. (Previously presented) The machine according to claim 51, wherein the web travel directions of said first and second gap formers are opposite each other.

53. (Previously presented) A machine for the production of a multi-layered fibrous web, comprising:

at least two formers for forming at least two layers in which each layer has a higher content of fines on one side respectively;

a couching zone in which the at least two layers are couched together such that each layer's side having a higher content of fines contact each other, wherein at least one of the at least two formers comprises at least one gap former including two circulating continuous dewatering belts. convergently arranged to form a headbox nip, and in which said dewatering belts are guided in an area of said headbox nip over a forming element; and

a headbox arranged to supply a fibrous suspension to said headbox nip,

wherein said at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side, and the web travel directions of said first and second gap formers are opposite each other, and

wherein a first layer created in said first gap former is guided together with at least one of said two dewatering belts around a deflection element, and then introduced via a

continuous belt, traveling in a generally opposite direction to a stream direction of said headbox, into said couching zone in which the first layer and a second layer formed by said

second gap former are couched together so that their sides having a higher content of fines come into contact with each other.

54. (Previously presented) The machine according to claim 53, wherein said deflection element comprises a deflection roll.

55. (Previously presented) The machine according to claim 53, wherein the first layer is guided around said deflection element together with an outer dewatering belt of said two dewatering belts, which does not come into contact with said forming element, and which is introduced into said couching zone via said outer dewatering belt.

56. (Previously presented) The machine according to claim 55, wherein said two dewatering belts are guided around said deflection element, and an inner dewatering belt of said two dewatering belts is separated from said outer dewatering belt which entrains the first layer following said deflection element.

57. (Previously presented) The machine according to claim 55, wherein said outer dewatering belt of said first gap former is guided in a generally horizontal direction, at least up to said couching zone,

58. (Previously presented) The machine according to claim 53, further comprising a fourdrinier former, wherein a third layer is created by said fourdrinier former and sheet formation of the third layer occurs with the higher content of fines on an outer side of the third layer facing away from said continuous belt;

wherein the first layer is guided over said deflection element and is couched together with the third layer; and

wherein the first layer and third layer are introduced via said continuous belt into said couching zone in which the first layer and second layers, are couched together so that their sides having higher content of fines come into contact with each other.

59. (Previously presented) The machine according to claim 55, wherein said outer dewatering belt of said first gap former is separated in web travel direction in front of said deflection element from an inner dewatering belt and the first layer is guided around said deflection element only together with said inner dewatering belt.

60. (Previously presented) The machine according to claim 58, wherein the third layer and the first layer are couched together in the area of at least one of said deflection element and in a couching roll.

61. (Previously presented) The machine according to claim 53, wherein after separation of said two dewatering belts of said second gap former, the second layer is introduced together with said outer dewatering belt into said couching zone in which the first and second layers are couched together so that their sides having a higher content of fines come into contact with each other.

62. (Previously presented) The machine according to claim 48, wherein a first layer of the at least two layers to be couched together, is created by a fourdrinier former and sheet formation of the first layer occurs with the higher content of fines on an outer side facing away from a continuous wire, and wherein a second layer is created by said at least one gap former and sheet formation occurs in the second layer with a higher content of fines on the forming element side.

63. (Previously presented) The machine according to claim 62, wherein a stream direction of a headbox associated with said first gap former correlates in general with the travel direction of the first layer created by said fourdrinier former.

64. (Previously presented) The machine according to claim 62, wherein the second layer created by said at least one gap former is introduced, after a separation of said two dewatering belts of said at least one gap former, together with said outer dewatering belt into said couching zone in which the second layer is joined with said continuous belt for the first and second layers to be couched together.

65. (Previously presented) The machine according to claim 64, wherein said continuous wire is guided in said couching zone in a generally horizontal direction.

66. (Previously presented) The machine according to claim 62, further comprising a second gap former arranged to form a third layer, wherein sheet formation of the third layer occurs with a higher content of fines on a forming element side, and wherein the third layer is couched together with the second layer in a second couching zone.

67. (Previously presented) The machine according to claim 66, wherein the stream direction of a headbox associated with said second gap former corresponds to the travel direction of the first layer created by said fourdrinier former.

68. (Previously presented) The machine according to claim 66, wherein the third layer is introduced after separation of said two dewatering belts of said second gap former together with said outer dewatering belt into said second couching zone, wherein the second layer is brought together with said continuous belt for couching together the second and third layers formed by said first and second gap formers.

69. (Previously presented) The machine according to claim 66, wherein said continuous wire is guided at least in the area of said couching zones in a generally horizontal direction.

70. (Previously presented) The machine according to claim 53, further comprising at least one additional gap former arranged for the formation of an at least three-layered fibrous web,

wherein sheet formation of the additional layer occurs with a higher content of fines on the forming element side, wherein the additional layer is couched in an additional couching zone with one of the at least two layers formed by the first or second gap former, and where at least one of the at least two layers is couched together with the additional layer so that their sides having higher content of fines come into contact with each other.

71. (Previously presented) The machine according to claim 70, wherein the stream direction of said headbox associated with said at least one additional gap former corresponds to the travel direction of the fibrous web to be created.

72. (Previously presented) The machine according to claim 70, wherein at least one of a multi-layered headbox and a single layered headbox is provided.

73. (Previously presented) The machine according to claim 48, wherein at least one single layered headbox is provided.

74. (Previously presented) The machine according to claim 46, further comprising uniform pressure dewatering elements for web dewatering.

75. (Previously presented) A process for the production of a multi-layered fibrous web, comprising:

forming at least two layers via at least two formers, such that each layer has a side with a higher fines content;

couching together the at least two layers in a couching zone so that the sides with higher fines content contact each other;

wherein at least one of the at least two layers is formed by at least one gap former.

76. (Previously presented) The process according to claim 75, wherein the fibrous web comprises one of a paper web or a cardboard web.

77. (Previously presented) The process according to claim 75, wherein the at least one gap former comprises two circulating continuous dewatering belts that run together forming a headbox nip and which are guided in the area of the headbox nip, loaded with a fibrous suspension by a headbox, over a forming element.

78. (Previously presented) The process according to claim 77, wherein the forming element comprises a forming roll.

79. (Previously presented) The process according to claim 77, wherein the at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side.

80. (Previously presented) The process according to claim 79, wherein the first and second gap formers are operated in opposite web travel directions.

81. (Previously presented) A process for the production of a multi-layered fibrous web, comprising:

forming at least two layers via at least two formers, such that each layer has a side with a higher fines content;

couching together the at least two layers in a couching zone so that the sides with higher fines content contact each other;

wherein at least one of the at least two layers is formed by at least one gap former comprising two circulating continuous dewatering belts that run together forming a headbox nip and which are guided in the area of the headbox nip, loaded with a fibrous suspension by a headbox, over a forming element,



wherein the at least one gap former comprises a first gap former and a second gap former arranged to form at least two layers, wherein the higher content of fines side of said at least two layers occurs on a forming element side, and the first and second gap formers are operated in opposite web travel directions, and

wherein a first layer formed in the first gap former is guided together with at least one of the two dewatering belts around a deflection element, and then via a continuous belt is introduced in a direction generally opposite to the travel direction of a first headbox into the couching zone in which the first layer and a second layer formed by the second gap former are couched together so that their sides having a higher content of fines come into contact with each other.

82. (Previously presented) The process according to claim 81, wherein the deflection element comprises a deflection roll.

83. (Previously presented) The process according to claim 81, wherein the first layer created in the first gap former is guided together with an outer dewatering belt, which does not come into contact with the forming element, around the deflection element and introduced into the couching zone via the outer dewatering belt.

84. (Previously presented) The process according to claim 83, wherein the two dewatering belts are guided around the deflection element and the an dewatering belt is separated from the outer dewatering belt entraining the layer consecutive to the deflection element.

85. (Previously presented) The process according to claim 81, wherein a third layer is created by a fourdrinier former and sheet formation of the third layer occurs with the higher content of fines on an outer side facing away from the continuous belt;

wherein the first layer is guided over the deflection element and is couched together with the third layer formed by the fourdrinier former; and

wherein the first and third layers are introduced via the continuous belt into the couching zone in which the layers formed by the first and third formers are couched together so that their sides having a higher content of fines come into contact with each other.

86. (Previously presented) The process according to claim 85, wherein the outer dewatering belt of the first gap former is separated in web travel direction in front of the deflection element from the inner dewatering belt and the first layer. is guided around the deflection element only together with the inner dewatering belt.

87. (Previously presented) The process according to claim 85, wherein the third layer and the first layer formed in the first gap former are couched together in the area of at least one of the deflection element and a couching roll.

88. (Previously presented) The process according to claim 83, wherein the second layer is guided after the separation of the two dewatering belts of the second gap former together with the outer dewatering belt to the couching zone, in which the first and second layers are couched together so that their sides of higher content of fines come into contact with each other.

89. (Previously presented) The process according to claim 75, wherein the first of the at least two layers to be couched together is created by a fourdrinier former and sheet formation of the first layer occurs with a higher content of fines on the outside facing away from the continuous wire, and the second layer is created by the at least one gap former and sheet formation occurs in the second layer with a higher content of fines on a forming element side.

90. (Previously presented) The process according to claim 89, wherein the stream direction of a head box associated with the first gap former correlates in general with the travel direction of the first layer created by the fourdrinier former.

91. (Previously presented) The process according to claim 89, wherein the second layer created by the at least one gap former is guided to the couching zone after separation of the two dewatering belts of the at least one gap former together with the outer dewatering belt, in which the second layer is joined together with the continuous belt for the first and second layers to be couched together.

92. (Previously presented) The process according to claim 89, wherein a second gap former is arranged to form a third layer wherein sheet formation of the third layer occurs with a higher content of fines on the forming element side, and wherein the third layer is couched together with the second layer in a second couching zone.

93. (Previously presented) The process according to claim 92, wherein the stream direction of a head box associated with the second gap former corresponds to the travel direction of the first layer formed by the fourdrinier former.

94. (Previously presented) The process according to claim 92, wherein the third layer is introduced after separation of the two dewatering belts of the second gap former together with the outer dewatering belt into the second couching zone in which it is brought together with the continuous belt for the couching of the second and third layer formed by the first and second gap formers.

95. (Previously presented) The process according to claim 79, wherein at least one additional gap former is arranged for the formation of an at least three-layered fibrous web, wherein sheet formation of the additional layer occurs with a higher content of fines on the

forming element side, wherein the additional layer is couched in an additional couching zone with one of the at least two layers formed by the first or second gap former, and where at least one of the at least two layers is couched together with the additional layer so that their sides having higher content of fines come into contact with each other.

96. (Previously presented) The process according to claim 95, wherein the stream direction of a headbox associated with the additional gap former corresponds to the travel direction of the fibrous web to be created.

97. (Previously presented) The process according to claim 77, wherein at least one of a multi-layered headbox and single-layered headbox is used.

(9) **EVIDENCE APPENDIX**

None.

(10) **RELATED PROCEEDINGS APPENDIX**

None.